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(FILE 'HOME' ENTERED AT 12:08:06 ON 11 DEC 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS, SCISEARCH' ENTERED AT 12:08:18 ON 11 DEC 2002

L1 382268 S ANIMAL(3A)MODEL
L2 3398 S HUMAN(3A)CARDIOVASCULAR(3A) (DISEASE OR DISORDER)
L3 58 S L1(S)L2
L4 29 DUP REM L3 (29 DUPLICATES REMOVED)

=> d au ti so 1-29 14

L4 ANSWER 1 OF 29 MEDLINE DUPLICATE 1
AU Sun Albert Y; Simonyi Agnes; Sun Grace Y
TI The "French paradox" and beyond: neuroprotective effects of polyphenols(1,2).
SO FREE RADICAL BIOLOGY AND MEDICINE, (2002 Feb 15) 32 (4) 314-8.
Journal code: 8709159. ISSN: 0891-5849.

L4 ANSWER 2 OF 29 MEDLINE DUPLICATE 2
AU Butler Tanya L; Kassed Cheryl A; Sanberg Paul R; Willing Alison E; Pennypacker Keith R
TI Neurodegeneration in the rat hippocampus and striatum after middle cerebral artery occlusion.
SO BRAIN RESEARCH, (2002 Mar 8) 929 (2) 252-60.
Journal code: 0045503. ISSN: 0006-8993.

L4 ANSWER 3 OF 29 MEDLINE DUPLICATE 3
AU Vaskonen Timo; Mervaala Eero; Krogerus Leena; Karppanen Heikki
TI Supplementation of plant sterols and minerals benefits obese Zucker rats fed an atherogenic diet.
SO JOURNAL OF NUTRITION, (2002 Feb) 132 (2) 231-7.
Journal code: 0404243. ISSN: 0022-3166.

L4 ANSWER 4 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AU Societa Italiana di Cardiologia
TI XIIIrd Scientific Annual Meeting of the Grupo di studio italiano di patologia cardiovascolare. Symposium held in conjunction with the Societa Italiana di Cardiologia: "Atrial fibrillation: The knowledge of anatomical-pathological bases as a guide to clinical decisions" and the symposium "Pulmonary arterial hypertension", Bologna, Italy, September 21-22, 2002.
SO Pathologica (Genoa), (Agosto, 2002) Vol. 94, No. 4, pp. 217-224. print.
Meeting Info.: XIIIrd Scientific annual meeting of the Grupo di studio italiano di patologia cardiovascolare. Symposium held in conjunction with the Societa Italiana di Cardiologia: "Atrial fibrillation: The knowledge of anatomical-pathological bases as a guide to clinical decisions" and the symposium "Pulmonary arterial hypertension". Bologna, Italy September 21-22, 2002 Societa Italiana di Cardiologia
. ISSN: 0031-2983.

L4 ANSWER 5 OF 29 MEDLINE DUPLICATE 4
AU Ye Shui Qing; Lavoie Tera; Usher David C; Zhang Li Q
TI Microarray, SAGE and their applications to cardiovascular diseases.
SO CELL RESEARCH, (2002 Jun) 12 (2) 105-15.
Journal code: 9425763. ISSN: 1001-0602.

L4 ANSWER 6 OF 29 CAPLUS COPYRIGHT 2002 ACS
AU Khurana, Rohit; Martin, John F.; Zachary, Ian
TI Gene therapy for cardiovascular disease: a case for cautious optimism
SO Hypertension (2001), 38(5), 1210-1216
CODEN: HPRTDN; ISSN: 0194-911X

L4 ANSWER 7 OF 29 MEDLINE DUPLICATE 5
 AU Matsumoto K; Morishita R; Moriguchi A; Tomita N; Aoki M; Sakonjo H;
 Matsumoto K; Nakamura T; Higaki J; Ogihara T
 TI Inhibition of neointima by angiotensin-converting enzyme inhibitor in
 porcine coronary artery balloon-injury model.
 SO HYPERTENSION, (2001 Feb) 37 (2) 270-4.
 Journal code: 7906255. ISSN: 1524-4563.

L4 ANSWER 8 OF 29 MEDLINE
 AU Herzberg M C
 TI Coagulation and thrombosis in cardiovascular disease: plausible
 contributions of infectious agents.
 SO ANNALS OF PERIODONTOLOGY, (2001 Dec) 6 (1) 16-9. Ref: 18
 Journal code: 9702874.

L4 ANSWER 9 OF 29 MEDLINE DUPLICATE 6
 AU Asmis R; Jelk J
 TI Vitamin E supplementation of human macrophages prevents neither foam cell
 formation nor increased susceptibility of foam cells to lysis by oxidized
 LDL.
 SO ARTERIOSCLEROSIS, THROMBOSIS, AND VASCULAR BIOLOGY, (2000 Sep) 20 (9)
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 Journal code: 9505803. ISSN: 1524-4636.

L4 ANSWER 10 OF 29 MEDLINE DUPLICATE 7
 AU Weisburger J H
 TI Approaches for chronic disease prevention based on current understanding
 of underlying mechanisms.
 SO AMERICAN JOURNAL OF CLINICAL NUTRITION, (2000 Jun) 71 (6 Suppl) 1710S-4S;
 discussion 1715S-9S. Ref: 30
 Journal code: 0376027. ISSN: 0002-9165.

L4 ANSWER 11 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AU Chen, Alex F. Y.; O'Brien, Timothy; Katusic, Zvonimir S.
 TI Functional influence of gene transfer of recombinant nitric oxide synthase
 to cardiovascular system
 SO Nitric Oxide (2000), 525-545. Editor(s): Ignarro, Louis J. Publisher:
 Academic Press, San Diego, Calif.
 CODEN: 69ALOG

L4 ANSWER 12 OF 29 MEDLINE DUPLICATE 8
 AU Wang S Q; Zhou Z Q
 TI Medical significance of cardiovascular function in hibernating mammals.
 SO CLINICAL AND EXPERIMENTAL PHARMACOLOGY AND PHYSIOLOGY, (1999 Oct) 26 (10)
 837-9. Ref: 19
 Journal code: 0425076. ISSN: 0305-1870.

L4 ANSWER 13 OF 29 MEDLINE DUPLICATE 9
 AU Chiu Y T; Liu S K; Liu M; Chen S P; Lin Y H; Mao S J; Chu R
 TI Characterization and quantitation of extracellular collagen matrix in
 myocardium of pigs with spontaneously occurring hypertrophic
 cardiomyopathy.
 SO CARDIOVASCULAR PATHOLOGY, (1999 May-Jun) 8 (3) 169-75.
 Journal code: 9212060. ISSN: 1054-8807.

L4 ANSWER 14 OF 29 MEDLINE DUPLICATE 10
 AU Hasenfuss G
 TI **Animal models of human**
cardiovascular disease, heart failure and hypertrophy.
 SO CARDIOVASCULAR RESEARCH, (1998 Jul) 39 (1) 60-76. Ref: 224
 Journal code: 0077427. ISSN: 0008-6363.

L4 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2002 ACS

AU Abe, Jun-Ichi; Berk, Bradford C.
 TI Reactive oxygen species as mediators of signal transduction in cardiovascular disease
 SO Trends in Cardiovascular Medicine (1998), 8(2), 59-64
 CODEN: TCMDEQ; ISSN: 1050-1738

L4 ANSWER 16 OF 29 MEDLINE DUPLICATE 11
 AU Shiota N; Fukamizu A; Takai S; Okunishi H; Murakami K; Miyazaki M
 TI Activation of angiotensin II-forming chymase in the cardiomyopathic hamster heart.
 SO JOURNAL OF HYPERTENSION, (1997 Apr) 15 (4) 431-40.
 Journal code: 8306882. ISSN: 0263-6352.

L4 ANSWER 17 OF 29 MEDLINE DUPLICATE 12
 AU Korcarz C E; Padrid P A; Shroff S G; Weinert L; Lang R M
 TI Doppler echocardiographic reference values for healthy rhesus monkeys under ketamine hydrochloride sedation.
 SO JOURNAL OF MEDICAL PRIMATOLOGY, (1997 Dec) 26 (6) 287-98.
 Journal code: 0320626. ISSN: 0047-2565.

L4 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AU Arsenian, Michael A.
 TI Carnitine and its derivatives in cardiovascular disease
 SO Progress in Cardiovascular Diseases (1997), 40(3), 265-286
 CODEN: PCVDAN; ISSN: 0033-0620

L4 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AU Ju, Haisong; Mc Dixon, Ian
 TI Extracellular matrix and cardiovascular diseases
 SO Canadian Journal of Cardiology (1996), 12(12), 1259-1267
 CODEN: CJCAEX; ISSN: 0828-282X

L4 ANSWER 20 OF 29 SCISEARCH COPYRIGHT 2002 ISI (R)
 AU LIN M C (Reprint); ROCKMAN H A; CHIEN K R
 TI HEART AND LUNG-DISEASE IN ENGINEERED MICE
 SO NATURE MEDICINE, (AUG 1995) Vol. 1, No. 8, pp. 749-751.
 ISSN: 1078-8956.

L4 ANSWER 21 OF 29 MEDLINE DUPLICATE 13
 AU Hotez P J; Hawdon J M; Cappello M; Jones B F; Pritchard D I
 TI Molecular pathobiology of hookworm infection.
 SO INFECTIOUS AGENTS AND DISEASE, (1995 Jun) 4 (2) 71-5. Ref: 45
 Journal code: 9209834. ISSN: 1056-2044.

L4 ANSWER 22 OF 29 MEDLINE DUPLICATE 14
 AU Tamura N; Ogawa Y; Itoh H; Arai H; Suga S; Nakagawa O; Komatsu Y; Kishimoto I; Takaya K; Yoshimasa T; +
 TI Molecular cloning of hamster brain and atrial natriuretic peptide cDNAs. Cardiomyopathic hamsters are useful models for brain and atrial natriuretic peptides.
 SO JOURNAL OF CLINICAL INVESTIGATION, (1994 Sep) 94 (3) 1059-68.
 Journal code: 7802877. ISSN: 0021-9738.

L4 ANSWER 23 OF 29 SCISEARCH COPYRIGHT 2002 ISI (R)
 AU SOBERMAN J E (Reprint); SULLIVAN J M
 TI NEW THINKING ABOUT SODIUM AND THE HEART
 SO CURRENT OPINION IN CARDIOLOGY, (SEP 1993) Vol. 8, No. 5, pp. 728-736.
 ISSN: 0268-4705.

L4 ANSWER 24 OF 29 CAPLUS COPYRIGHT 2002 ACS
 AU Molloy, Christopher J.
 TI Novel signal transduction targets in cardiovascular disease: role of platelet-derived growth factor in vascular smooth muscle cell proliferation

SO Drug Development Research (1993), 29(2), 148-57
CODEN: DDREDK; ISSN: 0272-4391

L4 ANSWER 25 OF 29 SCISEARCH COPYRIGHT 2002 ISI (R)
AU ROBBINS J (Reprint); DOETSCHMAN T; JONES W K; SANCHEZ A
TI EMBRYONIC STEM-CELLS AS A MODEL FOR CARDIOGENESIS
SO TRENDS IN CARDIOVASCULAR MEDICINE, (MAR/APR 1992) Vol. 2, No. 2, pp.
44-50.
ISSN: 1050-1738.

L4 ANSWER 26 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AU TRIANDAFILLOU J M; FAIR B; PETROVIC V; BALLINGER J R; COLE C W
TI OPTIMIZED RADIOLABELLING OF PIG GRANULOCYTES WITH INDIUM-111 TROPOLONATE.
SO NUCL MED BIOL, (1990) 17 (5), 469-472.
CODEN: NMBIEO. ISSN: 0883-2897.

L4 ANSWER 27 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AU HORVATH M
TI PSYCHOPHYSIOLOGICAL TESTING OF CARDIOVASCULAR REACTIVITY TO STRESS AND
PSYCHOLOGICAL CHALLENGE AN INTRODUCTORY OVERVIEW.
SO 4TH INTERNATIONAL CONFERENCE OF THE INTERNATIONAL ORGANIZATION OF
PSYCHOPHYSIOLOGY, PRAGUE, CZECHOSLOVAKIA. INT J PSYCHOPHYSIOL. (1989) 7
(2-4), 234-235.
CODEN: IJPSEE.

L4 ANSWER 28 OF 29 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AU SCRIABINE A
TI JAPAN-USA SYMPOSIUM ON CARDIOVASCULAR DRUGS RECENT ADVANCES IN CALCIUM
CHANNELS AND CALCIUM ANTAGONISTS TURTLE BAY OAHU HAWAII USA FEBRUARY 1-4
1989.
SO Cardiovasc. Drug Rev., (1989) 7 (1), 68-72.
CODEN: CDREEA.

L4 ANSWER 29 OF 29 MEDLINE
AU Fabricant C G
TI Viruses: causal factors in atherosclerosis.
SO MICROBIOLOGICAL SCIENCES, (1986 Feb) 3 (2) 50-2. Ref: 34
Journal code: 8510101. ISSN: 0265-1351.

=> d ab 14-20 14

L4 ANSWER 14 OF 29 MEDLINE DUPLICATE 10
AB The progress made in our understanding of the pathophysiology and
treatment of congestive heart failure (CHF) would not have been possible
without a number of animal models of heart failure and hypertrophy, each
one having unique advantages as well as disadvantages. The species and
interventions used to create CHF depends on the scientific question as
well as on factors such as ethical and economical considerations,
accessibility and reproducibility or the model. How closely the model
should mimic the human syndrome of CHF depends on the scientific question
under investigation. If the goal is to study pathophysiological processes
like remodeling or the function of subcellular systems such as excitation
contraction-coupling processes, contractile protein function or
energetics, the model of heart failure should mimic the clinical setting
as closely as possible. However, if defined causal connections are under
investigation such as structure-function analyses or regulation of gene
expression, exact reflection of the clinical setting by the animal model
may be less important. In this review, animal models of heart failure are
discussed with particular focus on similarities between the animal model
and the failing human heart regarding myocardial function as well as
molecular and subcellular mechanisms. In addition, new models of heart
failure and hypertrophy, and finally some recent animal models of
myocarditis are reviewed.

L4 ANSWER 15 OF 29 CAPLUS COPYRIGHT 2002 ACS

AB A review, with 52 refs. Redn.-oxidn. (redox) reactions that generate reactive oxygen species (ROS) have been identified as important chem. processes that regulate signal transduction. Because increased ROS may be a risk factor for cardiovascular events such as unstable angina, myocardial infarction and sudden death, understanding the biol. processes that generate ROS and the intracellular signals elicited by ROS will be important to gain insight into the pathogenesis of these diseases. In this review, we discuss the enzymes that generate ROS in cardiovascular tissues, the role of the mitogen-activated protein (MAP) kinase pathway in redox-sensitive signal transduction, and focus on tyrosine kinases as proximate "sensors" for redox-mediated signal events. The mechanisms by which these kinases regulate gene transcription are then discussed to provide insight into the pathogenic roles of ROS in hypertension, atherosclerosis and vascular remodeling.

L4 ANSWER 16 OF 29 MEDLINE DUPLICATE 11

AB BACKGROUND: Angiotensin (ANG) II plays crucial roles in promoting cardiovascular tissue remodeling. Human chymase catalyzes ANG II formation, whereas rat chymase (rat mast cell protease 1) degrades ANG I to inactive fragments. Such species differences should be considered when the functions of chymase in **human cardiovascular diseases** are investigated assuming an analogy with **animal models**. OBJECTIVE: To further characterize the recently identified ANG II-forming hamster chymase, and to analyze pathophysiologic roles played by chymase in the cardiomyopathy of the hamster. METHODS: The gene organization and the primary structure of hamster chymase were determined through molecular cloning. Chymase and angiotensin converting enzyme messenger RNA levels, and chymase-like and angiotensin converting enzyme activities were measured in the heart of BIO 14.6 cardiomyopathic hamsters aged 4, 12, and 25 weeks. RESULTS: The hamster chymase gene is 3 kb long. It has five exons and four introns, and the deduced amino-acid sequence was homologous to other mammalian chymases. The chymase messenger RNA levels and chymase-like activities in the BIO 14.6 hamster hearts were increased significantly at the ages of 12 weeks (the fibrotic stage) and 25 weeks (the hypertrophic stage), but not at age 4 weeks (the premyolytic stage). CONCLUSIONS: These results indicate that heart chymase is activated concurrently with the development of cardiomyopathy. Thus, we conclude that heart chymase could play the primary role in accelerating ANG II formation, thereby causing deleterious changes in the cardiomyopathic heart.

L4 ANSWER 17 OF 29 MEDLINE DUPLICATE 12

AB Cardiac ultrasound is a noninvasive technique that is commonly used to serially evaluate cardiac structure and function. Recent advances in Doppler-Echocardiography enable the ultrasonographer to perform a sophisticated noninvasive assessment of cardiovascular physiology. The Rhesus monkey is a frequently used non-human primate **animal model of human cardiovascular disease** because this species closely models human anatomy and physiology. However, while this species is frequently used in cardiovascular research, standardized echocardiographic values generated from large numbers of normal Rhesus are not available. In the present study, we performed cardiac ultrasound imaging on 28 healthy Rhesus monkeys to obtain normal reference values of cardiovascular structure and function in this species. Nomograms were generated from these data by plotting parameters of cardiovascular geometry and function with body weight. These normal reference data were compared to previously reported values obtained from prior studies that used noninvasive, invasive, and morphometric techniques.

L4 ANSWER 18 OF 29 CAPLUS COPYRIGHT 2002 ACS

AB A review, with 242 refs. Carnitine and its deriv. propionyl-L-carnitine

are endogenous cofactors which enhance carbohydrate metab. and reduce the intracellular buildup of toxic metabolites in ischemic conditions. The carnitines have been, and are being used in a spectrum of diseases including multiple cardiovascular conditions. These include angina, acute myocardial infarction, postmyocardial infarction, congestive heart failure, peripheral vascular disease, dyslipidemia, and diabetes. Most published data on carnitine, propionyl-L-carnitine, and other carnitine congeners are favorable but the clin. trials have been relatively small. In currently used doses, these substances are virtually devoid of significant side effects.

L4 ANSWER 19 OF 29 CAPLUS COPYRIGHT 2002 ACS

AB A review, with 78 refs. Extracellular matrix (ECM) in the heart and vascular wall includes fibrous proteins and proteoglycans. Fibrous proteins are classified within two categories: structural (collagen and elastin) and adhesive mols. (laminin and fibronectin). These ECM components are important in maintenance of both structure and function of the heart and vascular tissues. Myocardial infarction, hypertrophy, hypertension and heart failure are well known to be assocd. with progressive cardiac fibrosis. Vascular hypertrophy and thickening has been assocd. with the pathol. series of events that attends both hypertension and restenosis. The accumulation of ECM in the cardiovascular system plays an important role in the development of heart failure after myocardial infarction and hypertension, as well as in vascular hypertrophy and restenosis. Angiotensin, as well as in vascular hypertrophy and restenosis. Angiotensin II (angiotensin) and transforming growth factor .beta.1 are known to play a role in signalling the abnormal accumulation of ECM in these cardiovascular diseases. Administration of angiotensin-converting enzyme inhibitor or angiotensin receptor type I antagonist is assocd. with regression of cardiac hypertrophy and fibrosis as well as vascular hypertrophy.

L4 ANSWER 20 OF 29 SCISEARCH COPYRIGHT 2002 ISI (R)

AB Technological miniaturization combined with the power of molecular genetics makes the mouse a **model animal** for understanding **human cardiovascular and pulmonary diseases**.

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